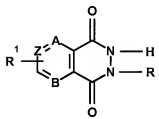
AMENDMENTS TO THE CLAIMS

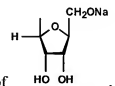
This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1.-27. (Cancelled)

28. (Previously presented) A method of treating diseases caused by disorders of nitrergic system and/or dopaminergic system of an organism comprising administering an active ingredient having normalizing effect with respect to nitrergic and dopaminergic systems, wherein the active ingredient is present in a pharmaceutically-acceptable carrier in an amount sufficient for effecting said systems, said active ingredient being a cyclic bioisostere of derivatives of a purine system having a general structural formula



where R is selected from the group consisting of 

, Li, Na, and K;

R^1 is selected from the group consisting of -H, -NH_2, -Br, -Cl, -OH, and -COOH;

A is selected from the group consisting of -N= and -C=;

B is selected from the group consisting of -N= and –C=;

Z is selected from the group consisting of -C= and -N=;

wherein when A is -N= , then B is -N= and Z is -C=, or pharmacologically acceptable salts thereof.

29. (Previously presented) The method as claimed in claim 28, wherein said active ingredient is selected from the group consisting of: sodium salt of 7-(P-D-ribofuranosile)pyrido[2,3-d]-6H-pyridazine-5,8-dione; sodium salt of 4-amino-7-(P-D-ribofuranosile)pyrido[2,3-d]-6H-pyridazine-5,8-dione; sodium salt of 3-bromo-7-(P-D-ribofuranosile)pyrido[2,3- d]-6H-pyridazine-5,8-dione; disodium salt of 4-hydroxy-7-(P-D-ribofuranosile)pyrido[2,3-d]-6H-pyridazine-5,8-dione; disodium salt of 3-carboxy-7-(P-D-ribofuranosile)pyrido[2,3-d]-6H-pyridazine-5,8-dione; lithium salt of pyrido [2,3-d]-6H-pyridazine-5,8-dione; sodium salt of pyrido [2,3-d]-6H-pyridazine-5,8-dione; potassium salt of pyrido [2,3-d]-6H-pyridazine-5,8-dione; sodium salt of 2-(P-D-ribofuranosile)benzo[d]-3H-pyridazine-l,4-dione; sodium salt of 5-amino-2-(p-D-ribofuranosile)benzo[d]-3H-pyridazine-l,4-dione; sodium salt of 6-amino-2-(3-D-ribofuranosile)benzo[d]-3H-pyridazine-l,4-dione; sodium salt of 5-chloro-2-(P-D-ribofuranosile)benzo[d]-3H-pyridazine-l,4-dione; disodium salt of 5-hydroxy-2-(P-D-ribofuranosile)benzo[d]-3H-pyridazine-l,4-dione; lithium salt of 5-amino-benzo[d]-3H-pyridazine-l,4-dione; sodium salt of 5-amino-benzo[d]-3H-pyridazine-l,4-dione; potassium salt of 6-amino-benzo[d]-3H-pyridazine-l,4-dione; disodium salt of 5-hydroxy-benzo[d]-3H-pyridazine-l,4-dione; disodium salt of 6-carboxy-benzo[d]-3H-pyridazine-l,4-dione; sodium salt of 7-(P-D-ribofuranosile)pyrazine[2,3-d]-6H-pyridazine-5,8-dione; sodium salt of 2-amino-7-(P-D-ribofuranosile)pyrazine[2,3-d]-6H-pyridazine-5,8-dione; sodium salt of 3-amino-7-(P-D-ribofuranosile)pyrazine[2,3-d]-6H-pyridazine-5,8-dione; sodium salt of 3-bromo-7-(P-D-ribofuranosile)pyrazine[2,3-d]-6H-pyridazine-5,8-dione; disodium salt of 2-hydroxy-7-(p-D-ribofuranosile)pyrazine[2,3-d]-6H-pyridazine-5,8-dione; disodium salt of 2-carboxy-7-(P-D-ribofuranosile)pyrazine[2,3-d]-6H-pyridazine-5,8-dione; lithium salt of pyrazine[2,3-d]-6H-pyridazine-5,8-dione; sodium salt of pyrazine[2,3-d]-6H-pyridazine-5,8-dione; potassium salt of 3-bromo-pyrazine[2,3-d]-6H-pyridazine-5,8-dione; sodium salt of 2-amino-pyrazine[2,3-d]-6H-pyridazine-5,8-dione; sodium salt of 7-(β-D-ribofuranosile)pyrimido[4,5-d]-6H-pyridazine-5,8-dione; sodium salt of 2-amino-7-(β-D-ribofuranosile)pyrimido[4,5-d]-6H-pyridazine-5,8-dione; sodium salt of 4-amino-7-(β-D-ribofuranosile)pyrimido[4,5-d]-6H-pyridazine-5,8-dione; sodium salt of 2-bromo-7-(β-D-ribofuranosile)pyrimido[4,5-d]-6H-pyridazine-5,8-dione; sodium salt of 4-hydroxy-7-(β-D-ribofuranosile)pyrimido[4,5-d]-6H-pyridazine-5,8-dione;

sodium salt of 4-carboxy-7-(β-D-ribofuranosile)pyrimido[4,5-d]-6H-pyridazine-5,8-dione; lithium salt of pyrimido[4,5-d]-6H-pyridazine-5,8-dione; sodium salt of 2-amino-pyrimido[4,5-d]-6H-pyridazine-5,8-dione; and potassium salt of 4-bromo-pyrimido[4,5-d]-6H-pyridazine –5,8-dione.

30. (Withdrawn) The method as claimed in claim 28, wherein the active ingredient is used as a neuroprotector in a pharmaceutical composition for protection of a nervous system.

31. (Withdrawn) The method as claimed in claim 28, wherein the active ingredient is used in a pharmaceutical composition for improvement of cognitive function and normalization of psychophysiological status.

32. (Withdrawn) The method as claimed in claim 28, wherein the active ingredient is used in a pharmaceutical composition of anxiolytic and antidepressive action.

33. (Currently amended) The method as claimed in claim 28, wherein the diseases are selected from the group consisting of: diseases caused by drug abuse; insomnia; sexual disorders~~/sexual dysfunction~~; gastro-intestinal disorders; psychoses~~; inorganic psychoses;~~ affective disorders; personality disorders; psychiatric disorders of mood; schizophrenia and schizoaffective disorders; polydipsia; ~~bipolar disorders; dysphoric mania;~~ anxiety and associated diseases; obesity; bacterial infections of the central nervous system; disorders of learning; disorders of memory; ~~Parkinson's disease;~~ neurodegenerative diseases; ~~Alzheimer's disease; depression;~~ extrapyramidal side effects of neuroleptics; hypothalamic-pituitary effects; ~~vascular and cardiovascular diseases;~~ dystonia; dyskinesia; hyperkinesis; dementia; ischemia; and motion disorders; ~~hypertension; and diseases caused by a hyperactive immune system~~.

34. (New) The method as claimed in claim 33, wherein the neurodegenerative disease is a Parkinson's disease or a Alzheimer's disease.

35. (New) The method as claimed in claim 33, wherein the sexual disorder is a sexual dysfunction.

36. (New) The method as claimed in claim 33, wherein the psychoses is an inorganic psychoses.

37. (New) The method as claimed in claim 33, wherein the psychiatric disorders of mood is a bipolar disorder, dysphoric mania, or depression.